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KILPATRICK STOCKTON LLP 607 14TH STREET, N.W. WASHINGTON, DC 20005			SUCHECKI, KRYSZYNA	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/801,534

Applicant(s)

POLICHAR ET AL.

Examiner

Krystyna Suchecki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 14-18 is/are rejected.
- 7) ☐ Claim(s) 19-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 19-21 are objected to because of the following informalities: Claim 19 is objected to for lack of antecedent in the claims for “each microsphere”. For examination purposes, Claim 19 will be interpreted as having proper antecedent for the microspheres. Claims 20 and 21 are objected to for referring to method claims. For examination purposes, Claims 20 and 21 will be interpreted as referring back to the imaging system of claim 19. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Endo (US 5,452,337).

4. Regarding Claim 14, Figure 1 of Endo teaches an imaging system comprising: means for converting non-visible radiation representative of an object into visible radiation representative of an object (21); means for collecting the visible radiation representative of an object (22); means for focusing the visible radiation representative of an object (oval representative of lens within item 23); means for receiving the focused visible radiation representative of an object (CCD); means for imaging the focused visible radiation to form an image of the object (46); and

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means for manipulating the image of the object in order to identify characteristics of the object (39).

5. Claims 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Karellas (US 5,465,284).

6. Regarding Claim 15, Figure 11 of Karellas teaches an imaging system comprising: a non-visible radiation source (Column 15, lines 47-50); an object to be imaged (90); a transmissive screen (104) for converting non-visible radiation from the non-visible radiation source into visible radiation after the non-visible radiation passes through the object to be imaged; a transmissive optical coating (116) on the transmissive screen for concentrating the visible radiation from the transmissive screen; and an optical focusing system (120) for focusing the concentrated visible radiation from the transmissive optical coating onto an imaging device.

7. Regarding Claim 16, Karellas teaches the non-visible radiation as x-ray radiation (Column 15, lines 47-50 and 56).

8. Regarding Claim 18, Karellas teaches an imaging system further including a binder layer, binding the transmissive screen to the transmissive optical coating (Column 9, lines 36- Column 10, line 9; Column 14, line 58-Column 15, line 6 and Column 15, line 67-Column 16, line 1).

Allowable Subject Matter

9. Claims 17 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable over the prior art if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The claims must also overcome the objections listed above.

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10. The following is a statement of reasons for the indication of allowable subject matter: Claims 17 and 19 contain allowable subject matter for at least the reason that the prior art of record fails to teach or reasonably suggest an imaging system comprising a transmissive screen with a transmissive optical coating on the transmissive screen wherein the transmissive optical coating contains microspheres as claimed. Claims 20 and 21 are allowable at least by virtue of their dependency.

Double Patenting

11. Claims 14, 15, 16 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9, and 12 of U.S. Patent No. 5,608,774 in view of Karellas.

12. Regarding Claim 14, US 5,608,774 teaches an imaging system (Claim 1, preamble) comprising means for converting a non-visible radiation representative of an object into visible radiation representative of an object (Claim 1), means for collecting the visible radiation representative of an object (Claim 10, mirror); means for receiving the visible radiation representative of an object (Claims 1, 9 and 12) and means for imaging the focused visible radiation to form an image of the object (Claim 1).

13. US 5,608,774 fails to claim means for focusing the visible radiation representative of an object and means for manipulating the image of the object in order to identify characteristics of the object.

14. Karellas teaches an imaging system comprising means for focusing visible radiation representative of an object (Column 8, lines 46-57) and means for manipulating the image of the object in order to identify characteristics of the object (Figure 12, item 146 and Column 16). The

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focusing means ensures that light from a scintillating screen reaches the surface of a CCD element (Column 4, lines 1-13) and the manipulating means allows for unwanted pixel removal (Column 16, lines 34-38).

15. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use means for focusing visible radiation representative of an object (Column 8, lines 46-57) and means for manipulating the image of the object in the system of 5,608,774 as taught by Karellas in order to identify characteristics of the object (Figure 12, item 146 and Column 16) in order to ensure that light from a scintillating screen reaches the surface of a CCD element (Column 4, lines 1-13) and to allow for unwanted pixel removal (Column 16, lines 34-38).

16. Regarding Claims 15, 16 and 18, US 5,608,774 teaches an imaging system comprising a non-visible (x-ray) radiation source, an object to be imaged and a transmissive screen for converting non-visible radiation from the non-visible radiation source into visible radiation after the non-visible radiation passes through the object to be imaged and an optical coupling system for coupling visible radiation from the transmissive screen onto an imaging device.

17. US 5,608,774 fails to claim a transmissive optical coating on the transmissive screen for concentrating the visible radiation from the transmissive screen and an optical focusing system for focusing the concentrated visible radiation from the transmissive optical coating onto an imaging device. A binder layer binding the transmissive screen to the transmissive optical coating is also not claimed.

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18. Karellas teaches a transmissive optical coating (116) on the transmissive screen for concentrating the visible radiation from the transmissive screen; and an optical focusing system (120) for focusing the concentrated visible radiation from the transmissive optical coating onto an imaging device. Karellas also teaches an imaging system further including a binder layer, binding the transmissive screen to the transmissive optical coating (Column 14, line 58-Column 15, line 6). The transmissive optical coating on the transmissive screen provides increased spatial resolution (Column 9, lines 36-64), and optical focusing system allows effective shielding of the CCD from extraneous “snow” causing x-ray radiation (Column 9, line 65- Column 10, line 9).

19. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmissive optical coating, optical focusing system and binder layer of Karellas in the system of 5,608,774 for the benefit of binding the transmissive screen to the transmissive optical coating while providing increased spatial resolution (Karellas, Column 9, lines 36-64) and effective shielding of the CCD from extraneous “snow” causing x-ray radiation (Karellas, Column 9, line 65- Column 10, line 9).

20. Claims 14, 15, 16 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4 and 5 of U.S. Patent No. 5,909,478 in view of Karellas.

21. Regarding Claim 14, 5,909,478 teaches an imaging system comprising: means for converting non-visible radiation representative of an object into visible radiation representative of an object; means for collecting the visible radiation representative of an object; means for focusing the visible radiation representative of an object; means for receiving the focused visible

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radiation representative of an object; and means for imaging the focused visible radiation to form an image of the object.

22. 5,909,478 fails to claim means for manipulating the image of the object in order to identify characteristics of the object.

23. Karellas teaches means for manipulating the image of the object in order to identify characteristics (90) of the object with further allows for unwanted pixel removal and turning of the image (Column 16, lines 34-38).

24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the manipulating means of Karellas in 5,909,478 in order to provide identification of object characteristics and to further allow for unwanted pixel removal and turning of the image (Karellas, Column 16, lines 34-38).

25. Regarding claims 15, 16 and 18, 5,909,478 claims an imaging system comprising a non-visible radiation (x-ray) source, an object to be imaged, a transmissive optical screen for converting non-visible radiation from the non-visible radiation source into visible radiation after the non-visible radiation passes through the object to be imaged and an optical focusing system for focusing the visible radiation from the transmissive screen onto an imaging device.

26. 5,909,478 fails to claim a transmissive optical coating on the transmissive screen for concentrating the visible radiation from the transmissive screen so that the optical focusing system can focus the concentrated visible radiation from the transmissive optical coating onto an imaging device. A binder layer binding the transmissive screen to the transmissive optical coating is also not claimed.

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27. Karellas teaches a transmissive optical coating (116) on a transmissive screen for concentrating the visible radiation from the transmissive screen; and an optical focusing system (120) for focusing the concentrated visible radiation from the transmissive optical coating onto an imaging device. Karellas also teaches an imaging system further including a binder layer, binding the transmissive screen to the transmissive optical coating (Column 14, line 58-Column 15, line 6). The transmissive optical coating on the transmissive screen provides increased spatial resolution (Column 9, lines 36-64), and optical focusing system allows effective shielding of the CCD from extraneous “snow” causing x-ray radiation (Column 9, line 65- Column 10, line 9).

28. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmissive optical coating, optical focusing system and binder layer of Karellas in the system of 5,909,478 for the benefit of binding the transmissive screen to the transmissive optical coating while providing increased spatial resolution (Karellas, Column 9, lines 36-64) and effective shielding of the CCD from extraneous “snow” causing x-ray radiation (Karellas, Column 9, line 65- Column 10, line 9).

29. Claims 14-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 8 of U.S. Patent No. 6,389,105 in view of Karellas.

30. Regarding claim 14, 6,389,105 claims an imaging system comprising means for converting non-visible radiation into visible radiation; means for focusing the visible radiation; means for receiving the focused visible radiation; and means for imaging the focused radiation to form an image. An object to be imaged is implied.

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31. 6,389,105 fails to claim an object to be imaged so that radiation representative of an object is formed. Means collecting visible radiation representative of an object and means for manipulating an image of an object in order to identify characteristics of the object is also not claimed.

32. Karellas teaches that imaging systems are used for imaging objects (Abstract) in order to identify characteristics (90) of the object. Collection means (hood) prevents ambient radiation from reaching an imager (Column 1, lines 58-61). Manipulation means are used to assist with this goal and allows for unwanted pixel removal and turning of the image (Column 16, lines 34-38).

33. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the collecting and manipulating means of Karellas in 6,389,105 in order to provide identification of object characteristics, prevent ambient radiation from reaching an imager (Column 1, lines 58-61) and to further allow for unwanted pixel removal and turning of the image (Karellas, Column 16, lines 34-38). The use of an object as taught by Karellas in the system of 6,389,105 would result in radiation representative of an object that could be converted, collected, focused, received, imaged and manipulated.

34. Regarding Claims 15-18, 6,389,105 claims an imaging system comprising a non-visible (x-ray) radiation source; a transmissive screen for converting non-visible radiation from the non-visible radiation source into visible radiation; a transmissive optical coating (microspheres) on the transmissive screen for concentrating the visible radiation from the transmissive screen; and an optical focusing system for focusing the concentrated visible radiation from the transmissive

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optical coating onto an imaging device. Also taught is a binder layer binding the transmissive screen to the transmissive optical coating. An object to be imaged is implied.

35. 6,389,105 fails to claim an object to be imaged so that non-visible radiation can pass through an object to be imaged before being converted by the transmissive screen.

36. Karellas teaches that imaging systems are used for imaging objects (Abstract) in order to identify characteristics (90) of the object (Column 1, lines 26-29).

37. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an object to be imaged so that non-visible radiation can pass through an object to be imaged before being converted by a transmissive screen so that identification of object characteristics can be performed (Karellas, Abstract and Column 1, lines 26-29, and item 90).

38. Claims 14-16 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17 and 19 of U.S. Patent No. 6,178,224 in view of Karellas.

39. Regarding claim 14, 6,178,224 claims an imaging system comprising means for converting non-visible radiation into visible radiation; means for focusing the visible radiation; means for receiving the focused visible radiation; and means for imaging the focused radiation to form an image. An object to be imaged is implied.

40. 6,178,224 fails to claim an object to be imaged so that radiation representative of an object is formed. Means collecting visible radiation representative of an object and means for

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manipulating an image of an object in order to identify characteristics of the object is also not claimed.

41. Karellas teaches that imaging systems are used for imaging objects (Abstract) in order to identify characteristics (90) of the object. Collection means (hood) prevents ambient radiation from reaching an imager (Column 1, lines 58-61). Manipulation means are used to assist with this goal and allows for unwanted pixel removal and turning of the image (Column 16, lines 34-38).

42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the collecting and manipulating means of Karellas in 6,178,224 in order to provide identification of object characteristics, prevent ambient radiation from reaching an imager (Column 1, lines 58-61) and to further allow for unwanted pixel removal and turning of the image (Karellas, Column 16, lines 34-38). The use of an object as taught by Karellas in the system of 6,178,224 would result in radiation representative of an object that could be converted, collected, focused, received, imaged and manipulated.

43. Regarding Claims 15, 16 and 18, 6,178,224 claims an imaging system comprising a non-visible (x-ray) radiation source; a transmissive screen for converting non-visible radiation from the non-visible radiation source into visible radiation; a transmissive optical coating on the transmissive screen for concentrating the visible radiation from the transmissive screen; and an optical focusing system for focusing the concentrated visible radiation from the transmissive optical coating onto an imaging device. Also taught is a binder layer binding the transmissive screen to the transmissive optical coating. An object to be imaged is implied.

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44. 6,178,224 fails to claim an object to be imaged so that non-visible radiation can pass through an object to be imaged before being converted by the transmissive screen.

45. Karellas teaches that imaging systems are used for imaging objects (Abstract) in order to identify characteristics (90) of the object (Column 1, lines 26-29).

46. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an object to be imaged in the system of 6,178,224 as taught by Karellas so that non-visible radiation can pass through an object to be imaged before being converted by a transmissive screen so that identification of object characteristics can be performed (Karellas, Abstract and Column 1, lines 26-29, and item 90).

Conclusion

47. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent to Pleyber (US 5,047,642) is of interest for teaching spherical lenses associated with a scintillation screen. The lenses are inside the scintillation screen, however, and are not configured as a coating. Vosburgh (US 3,944,835) is of interest for teaching a lens-like array (12) associated with a scintillation screen (10). The lens-like array does not cooperate with the scintillation screen as claimed in the instant application such that radiation first passes through the screen and then to the lens.


48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krystyna Suchecki whose telephone number is (571) 272-2495. The examiner can normally be reached on regular working days and hours.

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49. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

50. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER